



RETRACTABLE, NON-LETHAL HIGH VOLTAGE STUN SWORD

CROSS-REFERENCES TO RELATED PATENTS

6,404,613 June, 2002 Dowling, et al.

6,091,597 July, 2000 Lin

BACKGROUND OF THE INVENTION

This invention relates to high voltage, low amperage stun devices used primarily for self-protection. The embodiment of the invention is a non-lethal, non-cutting, sword-like device that is retractable into a portable size, but is a viable, self-defense weapon that presents no conflict with most state and local laws.

The prior art is two-fold: the sword, and high voltage self defense mechanisms. The particular type of sword that was the inspiration for the invention is the traditional Japanese sword with a rough blade length of 28-32 inches, (sharp along one side of its entire length as well as at the tip of the blade) and a blade-to-hilt length ratio of approximately three to one. This type of sword is known as a "*katana*."

High voltage self defense devices function by delivering a voltage pulse between two electrodes, typically spaced approximately one inch from each other to allow the current to visibly arc between the electrodes when activated. These devices are currently manufactured in various forms including 1) the traditional hand-held device with electrodes inches from the hand of the operator; 2) a compressed air model that fires a one-time, wire-attached pair of electrodes up to fifteen feet to a target; 3) "stun batons" which are similar to the hand-held model but for an extension of one to two feet from the hand-held trigger to the electrodes. Within the field of stun

batons are both single and multi-stage retractable stun batons that extend an extra foot to eighteen inches from the handle.

Though closest in concept to the invention, multi-stage, retractable stun batons are easily distinguished from the invention on the basis of 1) the design of the retractable portion of a multi-stage stun baton has wider, and fewer telescoping segments (between 1 and 3), creating a shorter overall extended reach than the invention, requiring its user to be closer to the target than if he were using the invention (the preferred embodiment of which has 6 telescoping segments); 2) the resulting dimensions or ratio of shocking surface-to-handle in stun batons are not similar enough to that of a sword for sword techniques to be used; 3) the weight of the retractable portion of the stun baton is such that it is too heavy toward the tip to be used as a sword without either injuring the target with the blow or damaging the baton; 4) the integration of the conductive surface into the inert telescoping member of the stun baton necessitates replacement of the entire unit in case of damage to either of the conductive surfaces or the support member, whereas the independent nature of the mast and probes in the "blade" of the invention allows for rapid replacement of any malfunctioning, worn, or damaged component; 5) the conductive surfaces of stun batons cannot flex or twist, making them both susceptible to breakage as well as not making adequate contact with the target; and 6) the "blade" of the invention fully retracts into its handle, leaving only the very tip of the probes exposed – it extends retracts more fully, and in a more aesthetically pleasing manner, than any retractable stun baton.